

Ārawai Kākāriki Wetland Restoration Programme

Publications 2008–2020



Department of
Conservation
Te Papa Atawhai

New Zealand Government



Arawai Kākāriki

Wetland restoration programme

Arawai Kākāriki is committed to delivering new science-based information to address knowledge gaps and help achieve wetland restoration. A range of research and technical publications have been produced by this programme, several of which have resulted from partnerships with research agencies, universities, postgraduate student projects, iwi/hapū and regional councils.

This bibliography contains details of the Arawai Kākāriki publications that were produced between 2008 and 2020. These publications have been arranged in themes relating to the conservation and restoration of wetland species and ecosystems, and the relevant Arawai Kākāriki sites are indicated for each.

Key

| Symbol | Site |
|--------|---------------------|
| N | National |
| W | Whangamarino |
| A | Awarua-Waituna |
| O | Ō Tū Wharekai |
| M | Moawhitu |
| K | Kaimaumau-Motutangi |

For further information on these publications, contact Arawai_Kakariki@doc.govt.nz.

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Arawai Kākāriki reporting

Programme updates

| Publication | Year | Link | Site |
|--|------|----------------------------|------|
| Department of Conservation 2018: Arawai Kākāriki Wetland Restoration Programme: 2018 programme update. Department of Conservation, Wellington. 8 p. | 2018 | Click Here | N |
| Department of Conservation 2019: Arawai Kākāriki 2019 programme update. Department of Conservation, Wellington. 6 p. | 2019 | Click Here | N |

Report cards

| Publication | Year | Link | Site |
|---|------|----------------------------|------|
| Department of Conservation 2015: Research partnerships. National report card for Objective 9: Research – Undertake research that increases understanding of wetlands. Department of Conservation, Wellington. 2 p. | 2015 | Click Here | N |
| Department of Conservation 2015: LakeSPI monitoring. Ō Tū Wharekai report card for Objective 3: Habitat – Maintain or restore wetland ecosystem condition. Department of Conservation, Wellington. 2 p. | 2015 | Click Here | O |
| Department of Conservation 2015: Monitoring tools. National report card for Objective 10: Methods – Develop best practice methods for protecting and restoring freshwater wetland ecosystems. Department of Conservation, Wellington. 2 p. | 2015 | Click Here | N |
| Department of Conservation 2015: Water. Awarua-Waituna report card for Objective 2: Water – Maintain and enhance the water level and water quality to support wetland values. Department of Conservation, Wellington. 2 p. | 2015 | Click Here | A |
| Department of Conservation 2015: Successful increase in protected wetland habitat extent. Ō Tū Wharekai report card for Objective 1: Wetland extent – Maintain or increase the extent of wetland habitat. Department of Conservation, Wellington. 2 p. | 2015 | Click Here | O |
| Department of Conservation 2016: Weed control at Lambies Stream. Ō Tū Wharekai report card for Objective 3: Habitat – Maintain or restore wetland ecosystem condition. Department of Conservation, Wellington. 2 p. | 2016 | Click Here | O |

| Publication | Year | Link | Site |
|--|------|----------------------------|------|
| Department of Conservation 2017: Current and historical distribution of Australasian bittern (<i>Botaurus poiciloptilus</i>). National report card for Objective 4: Species – Maintain and enhance species diversity and threatened species. Department of Conservation, Wellington. 2 p. | 2017 | Click Here | N |
| Department of Conservation 2017: Australasian bittern in Whangamarino Wetland. Whangamarino report card for Objective 4: Species – Maintain and enhance species diversity and threatened species. Department of Conservation, Wellington. 2 p. | 2017 | Click Here | W |
| Department of Conservation 2017: Giant kōkopu monitoring. Awarua-Waituna report card for Objective 4: Species – Maintain and enhance species diversity and threatened species. Department of Conservation, Wellington. 2 p. | 2017 | Click Here | A |
| Department of Conservation 2018: A giant skink inhabiting Ō Tū Wharekai. Ō Tū Wharekai report card for Objective 4: Species – Maintain and enhance indigenous species diversity and threatened species. Department of Conservation, Wellington. 2 p. | 2018 | Click Here | O |
| Department of Conservation 2019: A tiny treasure of Whangamiro – the swamp helmet orchid. Whangamarino report card for Objective 4: Species – Maintain and enhance indigenous species diversity and threatened species. Department of Conservation, Wellington. 2 p. | 2019 | Click Here | W |
| Department of Conservation 2019: Phosphorus in Whangamarino. Whangamarino report card for Objective 2: Water – Maintain and enhance the water level and water quality to support wetland values. Department of Conservation, Wellington. 2 p. | 2019 | Click Here | W |

General

| Publication | Year | Link | Site |
|--|------|----------------------------|------|
| Robertson, H.; Suggate, R. 2011: Arawai Kākāriki Wetland Restoration Programme 2007–2010: Implementation report. Department of Conservation, Wellington. 75 p. | 2011 | Click Here | N |
| Sullivan, W.; Robertson, H.; Clucas, R.; Cook, L.; Lange, K. 2012: Arawai Kākāriki Wetland Restoration Programme: Ō Tū Wharekai outcomes report 2007–2011. Department of Conservation, Christchurch. 59 p. | 2012 | Click Here | O |
| Duggan, K.; Roberts, L.; Beech, M.; Robertson, H.; Brady, M.; Lake, M.; Jones, K.; Hutchinson, K.; Patterson, S. 2013: Arawai Kākāriki Wetland Restoration Programme: Whangamarino outcomes report 2007–2011. Department of Conservation, Wellington. 76 p. | 2013 | Click Here | W |

Threatened species – Status and recovery

Threatened birds – Australasian bittern / matuku

| Publication | Year | Link | Site |
|--|------|----------------------------|------|
| O'Donnell, C.F.J. 2011: Breeding of the Australasian bittern (<i>Botaurus poiciloptilus</i>) in New Zealand. <i>Emu</i> 111(3): 197–201. | 2011 | Click Here | N |
| O'Donnell, C.F.J.; Robertson, H.A. 2016: Changes in the status and distribution of Australasian bitterns (<i>Botaurus poiciloptilus</i>) in New Zealand, 1800s–2011. <i>Notornis</i> 63: 152–166. | 2016 | Click Here | N |
| Department of Conservation 2017: Current and historical distribution of Australasian bittern (<i>Botaurus poiciloptilus</i>). National report card for Objective 4: Species – Maintain and enhance species diversity and threatened species. Department of Conservation, Wellington. 2 p. | 2017 | Click Here | N |
| Department of Conservation 2017: Australasian bittern in Whangamarino Wetland. Whangamarino report card for Objective 4: Species – Maintain and enhance species diversity and threatened species. Department of Conservation, Wellington. 2 p. | 2017 | Click Here | W |
| Blyth, J.; Nation, T. 2020: Whangamarino Wetland – Bittern habitat assessment (phase 2). Prepared for the Department of Conservation by Taylor Collaborations Limited. 20 p. | 2020 | Click Here | W |

Threatened fishes and invertebrates

| Publication | Year | Link | Site |
|--|------|----------------------------|------|
| Hicks, A. 2010: Facultative amphidromy and the threatened giant kōkopo: Benefits of larval retention may be compromised by artificially opening an estuary. Unpublished report for the Department of Conservation, Southland. 12 p. | 2010 | Click Here | A |
| de Winton, M.; Sutherland, D.; Clayton, J. 2013: Kākahi (freshwater mussel) survey of the Ō Tū Wharekai Lakes. NIWA Client Report No: HAM2013-001. Prepared for the Department of Conservation by the National Institute of Water & Atmospheric Research, Hamilton. 26 p. | 2013 | Click Here | O |
| Department of Conservation 2017: Giant kōkopo monitoring. Awarua-Waituna report card for Objective 4: Species – Maintain and enhance species diversity and threatened species. Department of Conservation, Wellington. 2 p. | 2017 | Click Here | A |

Threatened lizards

| Publication | Year | Link | Site |
|---|------|----------------------------|------|
| Department of Conservation 2018: A giant skink inhabiting Ō Tū Wharekai. Ō Tū Wharekai report card for Objective 4: Species – Maintain and enhance indigenous species diversity and threatened species. Department of Conservation, Wellington. 2 p. | 2018 | Click Here | ○ |
| Lettink, M.; Monks, J.M. 2019: Ecology of scree skinks (<i>Oligosoma waimatense</i>) in Ō Tū Wharekai Wetland, mid-Canterbury high country, New Zealand. New Zealand Journal of Ecology 43(1): 3354. | 2019 | Click Here | ○ |

Threatened plants

| Publication | Year | Link | Site |
|---|------|----------------------------|------|
| Ledgard, G. 2011: Donatia novae-zelandiae in the Awarua–Waituna wetland complex: current research, results and future management considerations. Department of Conservation, Invercargill. 33 p. | 2011 | Click Here | A |
| Department of Conservation 2019: A tiny treasure of Whangamiro – the swamp helmet orchid. Whangamarino report card for Objective 4: Species – Maintain and enhance indigenous species diversity and threatened species. Department of Conservation, Wellington. 2 p. | 2019 | Click Here | W |

Ecological history

| Publication | Year | Link | Site |
|--|------|----------------------------|------|
| Cosgrove, S. 2012: Anthropogenic impacts on Waituna Lagoon: Reconstructing the environmental history. Unpublished MSc thesis, University of Otago, Dunedin. 171 p. | 2012 | Click Here | A |
| Woodward, C.; Shulmeister, J.; Larsen, J.; Jacobsen, G.E.; Zawadzki, A. 2014: The hydrological legacy of deforestation on global wetlands. Science 346(6211): 844–847. | 2014 | Click Here | N |
| Woodward, C.; Shulmeister, J.; Zawadzki, A.; Jacobsen, G. 2014: Major disturbance to aquatic ecosystems in the South Island, New Zealand, following human settlement in the Late Holocene. The Holocene 24(6): 668–678. | 2014 | Click Here | ○ |

Cultural values

| Publication | Year | Link | Site |
|---|------|----------------------------|------|
| Te Rūnanga o Arowhenua; Pauling, C.; Norton, T. 2010: Ō Tū Wharekai Ora Tonu: Cultural health assessment of Ō Tū Wharekai / the Ashburton Lakes . Prepared for the Department of Conservation. 84 p. | 2010 | Click Here | O |

Ecosystems – Animal communities

Freshwater fishes and invertebrates

| Publication | Year | Link | Site |
|--|------|----------------------------|------|
| Atkinson, E. 2008: What's lurking in the Waituna wetlands? A freshwater fish survey – Arawai Kakariki Project . Department of Conservation, Invercargill. 32 p. | 2008 | Click Here | A |
| Lake, M.; Brijs, J.; Hicks, B.J. 2008: Fish survey of the Whangamarino wetland 2007/2008 . Department of Conservation and University of Waikato Centre for Biodiversity & Ecology Research, Hamilton. 34 p. | 2008 | Click Here | W |
| Holmes, R.J.; Hayes, J.W.; Closs, G.P.; Beech, M.; Jary, M.; Matthaei, C.D. 2019: Mechanically reshaping stream banks alters fish community composition . River Research and Applications 35(3): 247-258. | 2019 | Click Here | A |
| Holmes, R. 2019: Native fish population responses to Waituna Lagoon outlet open-closure periods . Cawthron Institute Report No. 3351. Cawthron Institute, Nelson. 11 p. | 2019 | Click Here | A |

Ecosystems – Water

Guidelines and limit setting

| Publication | Year | Link | Site |
|---|------|----------------------------|------|
| Waituna Lagoon Technical Group (LTG) 2013: Ecological guidelines for Waituna Lagoon . Report prepared for Environment Southland by the Waituna Lagoon Technical Group. 57 p. | 2013 | Click Here | A |
| Schallenberg, M.; Hamilton, D.P.; Hicks, A.S.; Robertson, H.A.; Scarsbrook, M.; Robertson, B.; Wilson, K.; Whaanga, D.; Jones, H.F.E.; Hamill, K. 2017: Multiple lines of evidence determine robust nutrient load limits required to safeguard a threatened lake/lagoon system . New Zealand Journal of Marine and Freshwater Research 51(1): 78-95. | 2017 | Click Here | A |
| Schallenberg, M. 2019: Determining reference conditions for New Zealand lakes . Science for Conservation 334. Department of Conservation, Wellington. 46 p. | 2019 | Click Here | N |

Hydrology

| Publication | Year | Link | Site |
|---|------|----------------------------|------|
| Blyth, J.M. 2011: Ecohydrological characterisation of Whangamarino Wetland . Unpublished MSc thesis, University of Waikato, Hamilton. 189 p. | 2011 | Click Here | W |
| Blyth, J.M.; Campbell, D.I.; Schipper, L.A. 2013: Utilizing soil indicators to explain historical vegetation changes of a peatland subjected to flood inundation . <i>Ecohydrology</i> 6: 106–116. | 2013 | Click Here | W |
| Department of Conservation 2015: Water. Awarua-Waituna report card for Objective 2: Water – Maintain and enhance the water level and water quality to support wetland values . Department of Conservation, Wellington. 2 p. | 2015 | Click Here | A |
| Lockyer, C. 2015: Whangamarino Wetland hydrology study. Stage 3: Hydrological modelling . Report prepared for the Department of Conservation by Jacobs New Zealand Ltd, Wellington. 56 p. | 2015 | Click Here | W |
| Walsh, J.; Measures, R.; Bind, J. 2016: Waituna Lagoon level impacts on land drainage and inundation. Investigation stages 1 and 2 . NIWA Client Report No.: CHC2016-010. Prepared for the Department of Conservation by the National Institute of Water & Atmospheric Research Ltd, Christchurch. 71 p. | 2016 | Click Here | N |
| Holmes, R. 2019: Native fish population responses to Waituna Lagoon outlet open-closure periods . Cawthron Institute Report No. 3351. Cawthron Institute, Nelson. 11 p. | 2019 | Click Here | A |
| Blyth, J.; Nation, T.; Taylor, G. 2020: Moawhitu Wetland hydrological restoration: inundation scenarios, control structures and peak flow assessment . Prepared for the Department of Conservation by Taylor Collaborations Limited. 31 p. | 2020 | Click Here | M |

LakeSPI and macrophytes

| Publication | Year | Link | Site |
|--|------|----------------------------|------|
| de Winton, M. 2008: LakeSPI assessments for the lakes of the Ashburton River Basin. NIWA Client Report: HAM2008-017. Prepared for the Department of Conservation by the National Institute of Water & Atmospheric Research Ltd, Hamilton. 36 p. | 2008 | Click Here | O |
| Robertson, H.A.; Funnell, E. 2012: Aquatic plant dynamics of Waituna Lagoon, New Zealand: trade-offs in managing opening events of a Ramsar site. Wetlands Ecology and Management 20: 433–445. | 2012 | Click Here | A |
| de Winton, M.; Clayton, J.; Sutherland, D. 2013: Ecological conditions of the Ō Tū Wharekai Lakes based on LakeSPI. NIWA Client Report: HAM2013-003. Prepared for the Department of Conservation by the National Institute of Water & Atmospheric Research, Hamilton. 40 p. | 2013 | Click Here | O |
| Department of Conservation 2015: LakeSPI monitoring. Ō Tū Wharekai report card for Objective 3: Habitat – Maintain or restore wetland ecosystem condition. Department of Conservation, Wellington. 2 p. | 2015 | Click Here | O |
| de Winton, M.; Burton, T. 2017: Assessment of 18 Canterbury lakes using LakeSPI and weed surveillance of 22 water bodies. NIWA Client Report No: 2017340HN. Prepared for Environment Canterbury and the Department of Conservation by the National Institute of Water & Atmospheric Research Ltd, Hamilton. 64 p. | 2017 | Click Here | |
| de Winton, M. 2020: Vegetation status in Waituna Lagoon: Summer 2020. Prepared for the Department of Conservation by the National Institute of Water & Atmospheric Research Ltd, Hamilton. 20 p. | 2020 | Click Here | A |

Nutrients and sediment

| Publication | Year | Link | Site |
|---|------|----------------------------|------|
| Gibbs, M. 2009: Whangamarino Wetland pilot study: sediment sources. NIWA Client Report: HAM2009-033. Prepared for the Department of Conservation by the National Institute of Water & Atmospheric Research, Hamilton. 33 p. | 2009 | Click Here | W |
| Reeve, G.; Gibbs, M.; Swales, A. 2010: Recent sedimentation in the Whangamarino Wetland. NIWA Client Report: HAM2010-080. Prepared for the Department of Conservation by the National Institute of Water & Atmospheric Research Ltd, Hamilton. 39 p. | 2010 | Click Here | W |

| Publication | Year | Link | Site |
|--|------|----------------------------|------|
| Caruso, B.S.; O'Sullivan, A.D.; Faulkner, S.; Sherratt, M.; Clucas, R. 2013: Agricultural diffuse nutrient pollution transport in a mountain wetland complex. Water, Air, & Soil Pollution 224(10): Article no. 1695. | 2013 | Click Here | O |
| Wadworth-Watts, H.D. 2013: A hydrological and nutrient load balance for the Lake Clearwater catchment, Canterbury, New Zealand. Unpublished MSc thesis, University of Canterbury, Christchurch. 133 p. | 2013 | Click Here | O |
| Wadworth-Watts, H.D.; Caruso, B.S.; O'Sullivan, A.; Clucas, R. 2013: A hydrological and nutrient load balance for the Lake Clearwater catchment, Canterbury, New Zealand. Journal of Hydrology (New Zealand) 52(2): 115–130. | 2013 | Click Here | O |
| Lockyer, C. 2015: Whangamarino water quality modelling and mapping using source catchments. Report prepared for the Department of Conservation by Jacobs New Zealand Ltd, Wellington. 61 p. | 2015 | Click Here | W |
| Department of Conservation 2019: Phosphorus in Whangamarino. Whangamarino report card for Objective 2: Water – Maintain and enhance the water level and water quality to support wetland values. Department of Conservation, Wellington. 2 p. | 2019 | Click Here | W |
| Burge, O.R.; Clarkson, B.R.; Bodmin, K.A.; Bartlam, S.; Robertson, H.A.; Sukias, J.P.S.; Tanner, C.C. 2020: Plant responses to nutrient addition and predictive ability of vegetation N:P ratio in an austral fen. Freshwater Biology 65(4): 646–656. | 2020 | Click Here | O |

Restoring stream habitat

| Publication | Year | Link | Site |
|--|------|----------------------------|------|
| Holmes, R. 2019: Waituna Creek restoration trial: progress report. Cawthron Institute Report No. 3362. Prepared for the Department of Conservation by Cawthron Institute, Nelson. 16 p. | 2019 | Click Here | A |

Ecosystems – Invasive species

Managing predators

| Publication | Year | Link | Site |
|---|------|----------------------------|------|
| O'Donnell, C.F.J.; Clapperton, B.K.; Monks, J.M. 2015: Impacts of introduced mammalian predators on indigenous birds of freshwater wetlands in New Zealand. New Zealand Journal of Ecology 39(1): 19–33. | 2015 | Click Here | N |

Managing weeds – Willow

| Publication | Year | Link | Site |
|--|------|----------------------------|------|
| Bodmin, K.A.; Champion, P.D. 2010: Review of Whangamarino Wetland vegetation response to the willow control programme (1999 – 2008). NIWA Client Report: HAM2010-010. Prepared for Waikato Conservancy, Department of Conservation by the National Institute of Water & Atmospheric Research Ltd, Hamilton. 73 p. | 2010 | Click Here | W |
| Champion, P.; Bodmin, K. 2010: Assessment of willow control and environmental factors affecting the vegetation of Whangamarino Wetland. NIWA Client Report: HAM 2010-097. Prepared for the Department of Conservation by the National Institute of Water & Atmospheric Research Ltd, Hamilton. 31 p. | 2010 | Click Here | W |
| Watts, C.; Ranson, H.; Thorpe, S.; Cave, V.; Clarkson, B.; Thornburrow, D.; Batlam, S.; Bodman, K. 2015: Invertebrate community turnover following control of an invasive weed. Arthropod–Plant Interactions 9(6): 585–597. | 2015 | Click Here | N |
| Watts, C.; Thornburrow, D.; Cave, V. 2016: Responses of invertebrates to herbicide in Salix cinerea invaded wetlands: restoration implications. Ecological Management & Restoration 17(3): 243–249. | 2016 | Click Here | W |
| Department of Conservation 2016: Weed control at Lambies Stream. Ō Tū Wharekai report card for Objective 3: Habitat – Maintain or restore wetland ecosystem condition. Department of Conservation, Wellington. 2 p. | 2016 | Click Here | O |
| Burge, O.R.; Bodmin, K.A.; Clarkson, B.R.; Bartlam, S.; Watts, C.H.; Tanner, C.C. 2017: Glyphosate redirects wetland vegetation trajectory following willow invasion. Applied Vegetation Science 20(4): 620–630. | 2017 | Click Here | |

| Publication | Year | Link | Site |
|---|------|----------------------------|------|
| Griffiths, J.W.; McAlpine, K.G. 2017: Aerial glyphosate application reduces grey willow (<i>Salix cinerea</i>) canopy cover, increases light availability, and stimulates kahikatea (<i>Dacrydium dacrydioides</i>) growth. New Zealand Journal of Ecology 41(2): 234–239. | 2017 | Click Here | N |
| Griffiths, J.W.; Howell, C.J.; Burlace, D. 2017: Mapping Grey Willow (<i>Salix cinerea</i>) stand architecture using airborne laser scanning: implications for large-scale tree weed control. Ecological Management and Restoration 18(1): 66–70. | 2017 | Click Here | N |
| Griffiths, J.; Armstrong, H.; Innis, R.; Terry, J. 2018: Can aerial herbicide application control Grey Willow (<i>Salix cinerea</i> L.) and stimulate native plant recovery in New Zealand wetlands? Ecological Management & Restoration 19(1): 49–57. | 2018 | Click Here | N |
| Wech, J.; Suren, A.; Brady, M.; Kilroy, C. 2018: The effect of willow control using a glyphosate formulation on aquatic invertebrates within a New Zealand wetland. New Zealand Journal of Marine and Freshwater Research 52(1): 16–41. | 2018 | Click Here | W |

Managing weeds

| Publication | Year | Link | Site |
|--|------|----------------------------|------|
| Champion, P.D.; Bodmin, K.A. 2009: Whangamarino weed surveillance. NIWA Client Report: HAM 2009-111. Prepared for the Department of Conservation by the National Institute of Water & Atmospheric Research Ltd, Hamilton. 32 p. | 2009 | Click Here | W |

Ecosystems – Plant communities

Aquatic plants

| Publication | Year | Link | Site |
|--|------|----------------------------|------|
| de Winton, M. 2008: LakeSPI assessments for the lakes of the Ashburton River Basin. NIWA Client Report: HAM2008-017. Prepared for the Department of Conservation by the National Institute of Water & Atmospheric Research Ltd, Hamilton. 36 p. | 2008 | Click Here | O |
| Robertson, H.A.; Funnell, E.P. 2012: Aquatic plant dynamics of Waituna Lagoon, New Zealand: trade-offs in managing opening events of a Ramsar site. Wetlands Ecology and Management 20: 433–445. | 2012 | Click Here | A |

| Publication | Year | Link | Site |
|--|------|----------------------------|------|
| de Winton, M.; Clayton, J.; Sutherland, D. 2013: Ecological conditions of the Ō Tū Wharekai Lakes based on LakeSPI. NIWA Client Report: HAM2013-003. Prepared for the Department of Conservation by the National Institute of Water & Atmospheric Research, Hamilton. 40 p. | 2013 | Click Here | O |
| de Winton, M.; Burton, T. 2017: Assessment of 18 Canterbury lakes using LakeSPI and weed surveillance of 22 water bodies. NIWA Client Report No: 2017340HN. Prepared for Environment Canterbury and the Department of Conservation by the National Institute of Water & Atmospheric Research Ltd, Hamilton. 64 p. | 2017 | Click Here | |
| de Winton, M. 2020: Vegetation status in Waituna Lagoon: Summer 2020. Prepared for the Department of Conservation by the National Institute of Water & Atmospheric Research Ltd, Hamilton. 20 p. | 2020 | Click Here | A |

Wetland vegetation

| Publication | Year | Link | Site |
|--|------|----------------------------|------|
| Bodmin, K.A.; Robertson, H.A. 2010: Monitoring the ecological integrity of wetlands within Ō Tū Wharekai (Ashburton Basin): an initial investigation and baseline survey. NIWA Client Report: HAM2010-076. Prepared for the Department of Conservation by the National Institute of Water & Atmospheric Research Ltd, Hamilton. 63 p. | 2010 | Click Here | O |
| Reeves, P. 2011: Vegetation map of Whangamarino Wetland, 2007. Contract Report No. 2844. Prepared for the Department of Conservation by Wildland Consultants, Rotorua. 13 p. | 2011 | Click Here | W |
| Davis, M.; Brown, D.; Robertson, H.; Chadderton, L. 2013: How well does LCDB2 map wetlands in the Wellington region? DOC Research and Development Series 341. Department of Conservation, Wellington. 21 p. | 2013 | Click Here | N |
| Hooson, S. 2015: Ō Tū Wharekai vegetation mapping: methods, vegetation descriptions, and mapping constraints. Prepared for the Department of Conservation by Boffa Miskell Limited. 54 p. | 2015 | Click Here | N |

Lowland forests

| Publication | Year | Link | Site |
|---|------|----------------------------|------|
| Burge, O.R. 2015: Facilitating forest recovery in Awarua wetland, Southland, New Zealand. Unpublished PhD thesis, University of Canterbury, Christchurch. 217 p. | 2015 | Click Here | A |

Monitoring tools

Australasian bittern / matuku

| Publication | Year | Link | Site |
|---|------|----------------------------|------|
| O'Donnell, C.F.J.; Williams, E.M.; Cheyne, J. 2013: Close approaches and acoustic triangulation: techniques for mapping the distribution of booming Australasian bittern (<i>Botaurus poiciloptilus</i>) on small wetlands. Notornis60: 279–284. | 2013 | Click Here | N |
| "O'Donnell, C.F.J.; Williams, E.M. 2015: Protocols for the inventory and monitoring of populations of the endangered Australasian bittern (<i>Botaurus poiciloptilus</i>) in New Zealand. Department of Conservation Technical Series 38. Department of Conservation, Wellington. 40 p." | 2015 | Click Here | N |
| Williams, E.M. 2016: Developing monitoring methods for cryptic species: A case study of the Australasian bittern, <i>Botaurus poiciloptilus</i>. Unpublished PhD thesis, Massey University, Palmerston North. 239 p. | 2016 | Click Here | N |
| Williams, E.M.; O'Donnell, C.F.J.; Armstrong, D.P. 2018: Cost benefit analysis of acoustic recorders as a solution to sampling challenges experienced monitoring cryptic species. Ecology and Evolution 8(13): 6839–6848. | 2018 | Click Here | N |
| Williams, E.M.; Armstrong, D.P.; O' Donnell, C.F.J. 2019: Modelling variation in calling rates to develop a reliable monitoring method for the Australasian Bittern <i>Botaurus poiciloptilus</i>. Ibis 161(2): 260–271. | 2019 | Click Here | N |

Hydrology

| Publication | Year | Link | Site |
|---|------|----------------------------|------|
| Allen, C.; Kelly, D.; Robertson, H. 2014: Development of a National Wetland Hydrology Database. Cawthron Report No. 2361. Prepared for the Department of Conservation by Cawthron Institute, Nelson. 26 p. | 2014 | Click Here | N |

Mammalian predators

| Publication | Year | Link | Site |
|---|------|----------------------------|------|
| Gillies, C.; Brady, M. 2018: Trialling monitoring methods for feral cats, ferrets and rodents in the Whangamarino wetland. <i>New Zealand Journal of Zoology</i> 45(3): 192–212. | 2018 | Click Here | W |

Wetland vegetation

| Publication | Year | Link | Site |
|---|------|----------------------------|------|
| Kelly, D.; West, D.; Robertson, H.; Doehring, K.; Gansell, O. 2013: Development of a freshwater Tier 1 biodiversity monitoring programme: scoping report. Cawthron Institute Report No. 2362. Prepared for the Department of Conservation by Cawthron Institute, Nelson. 65 p. | 2013 | Click Here | N |

General

| Publication | Year | Link | Site |
|---|------|----------------------------|------|
| Department of Conservation 2015: Monitoring tools. National report card for Objective 10: Methods – Develop best practice methods for protecting and restoring freshwater wetland ecosystems. Department of Conservation, Wellington. 2 p. | 2015 | Click Here | N |

Wetland values and conservation

Wetland conservation and protection

| Publication | Year | Link | Site |
|---|------|----------------------------|------|
| Hansford, D. 2010: Wetlands. <i>New Zealand Geographic</i> 101: 49–74. | 2010 | Click Here | N |
| Department of Conservation 2015: Successful increase in protected wetland habitat extent. Ō Tū Wharekai report card for Objective 1: Wetland extent – Maintain or increase the extent of wetland habitat. Department of Conservation, Wellington. 2 p. | 2015 | Click Here | O |
| Denyer, K.; Robertson, H. 2016: Wetlands of New Zealand. Pp. 1–15 in Finlayson, C.M.; Milton, G.R.; Prentice, R.C.; Davidson, N.C. (Eds): <i>The Wetland Book.</i> Springer, Dordrecht. | 2016 | Click Here | N |

| Publication | Year | Link | Site |
|--|------|----------------------------|------|
| Robertson, H. 2016: Adapting the DOC ecosystem prioritisation framework for a changing climate. Pp. 55–59 in Robertson, H.; Bowie, S.; Death, R.; Collins, D. (Eds): Freshwater conservation under a changing climate: Proceedings of a workshop hosted by the Department of Conservation, 10–11 December 2013, Wellington. Department of Conservation, Christchurch. | 2016 | Click Here | N |
| Robertson, H.A. 2016: Wetland reserves in New Zealand: the status of protected areas between 1990 and 2013. New Zealand Journal of Ecology 40(1): 1–11. | 2016 | Click Here | N |
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